

Student Feedback: An Effective Tool in Teacher's Evaluation System**Kanjiya Rima¹, Patel Prakruti², Gandhi Anuradha³**¹Assistant Professor, Pharmacology Department, PDU Govt Medical College, Rajkot, Gujarat, India²Associate Professor, Pharmacology Department, B.J. Medical College, Ahmedabad, Gujarat, India³Professor and Head, Pharmacology Department, B.J. Medical College, Ahmedabad, Gujarat, India

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Abstract**Background:** In Medical education student feedback is a one of the best methods for the teachers to improve their strength and weakness and for the students to identify areas of need which help students in better learning.**Objectives:** To evaluate the quality of teaching by student feedback.**Material and Methods:** This is an interventional, prospective, cross over study was carried out on 2nd year undergraduate medical students (n=207). The feedback was taken during practical class of teachers (Teacher A, B, C, D). A baseline MCQ test was taken for checking the knowledge about the practical class. In first week, Feedback was taken from all the four batch's students regarding teacher's teaching skill and the feedback was given to the respective teachers by senior faculty. In second week, feedback was given to only two teachers (A & B) and it was compared with the teacher's (C & D) to whom the feedback was not given. In third week, another practical class was taken and again feedback was taken and given to the remaining two teachers (C & D) and compared to their earlier feedback when they had not been given the same. A MCQ test was taken during feedback session and compare with baseline MCQ test. After taking student feedback, evaluation is done by using Pendleton's model of feedback. A 5-point Likert scale questionnaire regarding usefulness of student feedback as a faculty development tool was given to the students and teachers at the end of the study.**Results:** Comparison of feedback showed a significant difference in parameters like presentation in class and providing additional resources. Half of the student agreed that feedback should be helpful to teachers to improve their teaching skill and enhances the overall performance of the teachers. 84% Students strongly agreed to agree that feedback should be filled by every batches during their class. Half of the students agreed that teacher's performance has helped them in their learning in the class. All teachers felt that feedback is an effective tool for overcome their weakness however 75% of teachers felt that feedback made them uncomfortable. All teachers agreed that student didn't give feedback seriously and strongly agreed that feedback should be taken after every semester and in all the batches.**Conclusion:** Student feedback is an important and effective tool for teacher's evaluation, but other sources of feedback may also useful for overall teacher's assessment of teaching skill.**Keywords:** Student Feedback, Medical Education, Undergraduates, Teaching Skill.**DOI:** 10.25258/ijcpr.18.6.191

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Introduction

Feedback is defined as "Specific information about the difference between trainees observed performance and a given standard with target of achieving improvement in performance of trainee".

It is a process which involves a two way non-judgmental communication with the purpose of providing information about quality of work to enhance one's ability with an objective to appreciate the appropriate characteristics with logical explanations and identification of inappropriate characteristics and provide chance to change them. Feedback is important way of interaction in which learner or student can express

his/her own thoughts and feelings regarding teacher's teaching skill. Feedback can either be positive-reinforcing with 'good' performance and behavior or negative-correcting and improving 'poor' performance. Feedback can be verbal, written or gestural. The process of feedback is informed, non-evaluative, objective appraisal of performance.

In Medical education feedback communication usually take place between the teacher and student. It is intended to improve skills or changes the method rather than estimation of the students or teachers. There is a number of ways to obtaining

feedback from the student. Like small group analysis (SGA), Questionnaires etc.

Student feedback is a one of the best method for the teachers and the students and it is important for teachers to improve their strength and weakness and acknowledge effective teaching practices, for the students it identify areas of need and provides suggestions for improvement and helps in better learning.

Teacher evaluation involves an opinion of the effectiveness of teaching. Improving the efficiency and quality of teaching depends on ensuring that teachers are highly skilled and motivated to perform. Evaluation has come to be known worldwide as a useful input to improve the quality of teaching. While there are many sources of improving teacher's performance, a student feedback is a most common method to evaluation of teaches skill. Obtaining feedback from the student has the additional benefit of allowing teachers to concern about student's problem in learning.

Student feedback has come to be known worldwide as a useful input to improve the quality of teaching although this type of studies aren't done in our country because of difficulty in giving feedback due to lack of training in giving feedback, courses variable (class time & size and day of class etc.), teacher's variables (like gender, age, personality, popularity etc.), students variables (gender, age, grade average, personality etc.), Administrative variable, differences in allotment of number of lectures, topic and timing of lectures, their personal experience with the teacher. Hence this study was undertaken in II MBSS student to evaluate the quality of teaching, to improve teacher's own teaching skill by identifying their strengths and weaknesses and also to enhance student learning.

Material and Methods

This prospective, interventional, cross-over and single centered study was carried out to study the effectiveness of student feedback as teacher evaluation tool in II year undergraduate medical students in Department of Pharmacology at B.J. Medical College, Ahmedabad, Gujarat for duration of 4 weeks.

Study Tools:

1. Teacher's teaching skill evaluation proforma was prepared and validated by subject experts of the Department of Pharmacology, B. J. Medical College, and Ahmedabad. Performa include teacher's teaching skill regarding preparation, presentation, timing, coordination etc.

2. 5 Point Likert Scale for students and teachers regarding overall study feedback as a faculty development tool and for comparison of knowledge before and after feedback class a MCQ test regarding particular practical class was design in study. These were pre-validated by same subject experts.

Study Procedure: Prior approval from the Institutional Ethics Committee and Head of the Department was obtained. After that 2nd year undergraduate medical students who were given written informed consent fulfilling subject selection criteria were enrolled in the study. The study was conducted during the practical class. Teachers were sensitized about the importance of student feedback before initiating the study.

Week 1: One practical class was taken by each teachers and teacher's teaching skill evaluation perfoma was filled up by students. The Proforma was filled anonymously by the students. A MCQ test regarding that practical class was taken for checking the knowledge about the practical class.

Week 2: Feedback regarding teacher's strength and weakness in teaching was given by two senior faculty of department of pharmacology B.J. Medical college Ahmedabad to teacher A and B and was not given to teacher C & D.

Comparison of teacher A & B feedback before and after giving feedback was done by using Pendleton's model of feedback.

Week 3: Another practical class was taken and again feedback was taken and given to the remaining two teachers (C & D) and compared to their earlier feedback when they had not been given the same.

Comparison of feedback between A& B and C&D was also done.

Week 4: A 5-point Likert scale regarding usefulness of student feedback as a faculty development tool was given to the students and teachers.

Data Analysis: The collected data was entered in MS Excel and before and after feedback was compared by using student's t test.

Results

Feedback analysis was done by using Pendleton's model for feedback analysis. Comparison of feedback before and after giving feedback by senior faculty show a significant difference in parameters like presentation in class, ($p=0.019810$) provide additional resourses ($p= 0.00375$, t-test, two tailed, paired). All others feedback parameters was not significantly different.

Table 1: Evaluation of teacher's teaching skill evaluation proforma of teacher A & B with and without feedback (week 1)

Sr.no	Feedback parameters	P value
1	Organized and prepare for the classes	0.64
2	Prompt in conducting classes	0.30
3	Appropriately use different teaching aids[chalk board]	0.15
4	Clear in presentation	0.01
5	Communicates effectively	0.15
6	Recommends additional learning Resources [Book, Journal, Website]	0.003
7	Provides timely feedback on student's performance	0.06
8	Creates comfortable learning environment for the students	0.44
9	Provide assistance and counseling on the subject and is available after classes for consultation	0.01
10	Interact and encourages student to ask question/participation	0.84
11	Maintain discipline in the class	0.16
12	Understanding regarding the practical	0.02

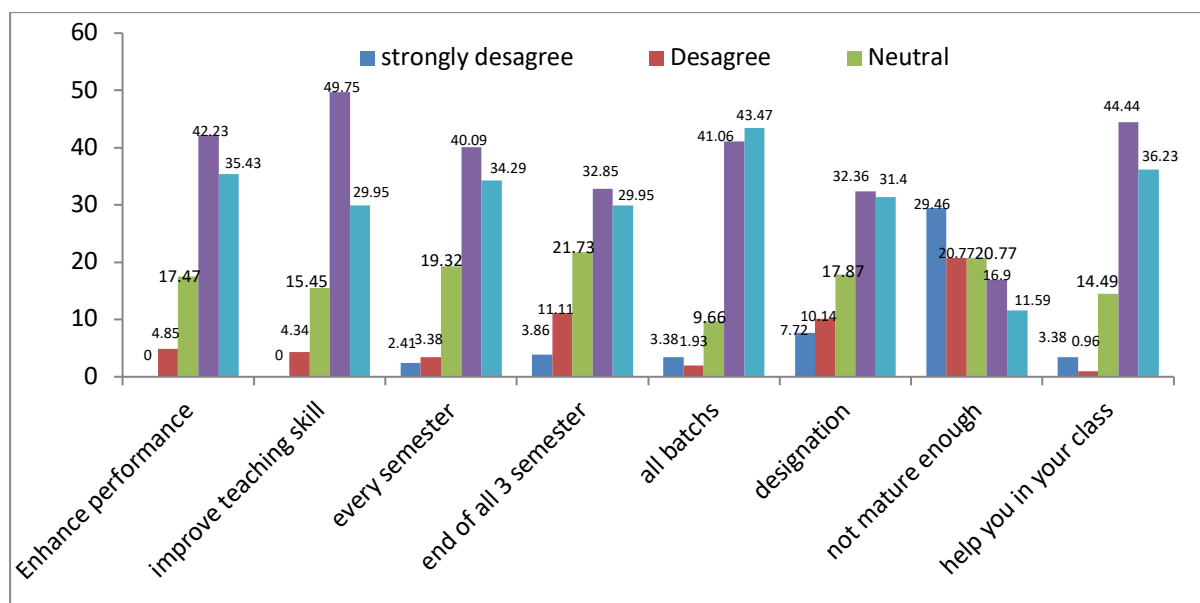
Week 2 feedback of A & B teacher's feedback with C & D teacher: Comparison of feedback of A & B batch (after feedback was given by senior faculty) with C & D batch (feedback was not given by senior faculty) show a significant difference in parameters like provide additional learning resources ($p= 0.001$, t-test, two tailed, paired), provide timely feedback on students performance, ($p= 0.03$, t-test, two tailed, paired) encourage student to ask any question($p= 0.04$, t-test, two tailed, paired). All others feedback parameters was not significantly different.

Week 3 feedback of C & D batch's teacher: Comparison of feedback of C & D batch's teacher (feedback was not given by senior faculty) with C & D batch (after feedback was given by senior faculty) show a significant difference in parameters like maintain discipline and understanding

regarding practical ($p= 0.03$ and 0.01 respectively, t-test, two tailed, paired) as compare to week 1 feedback.

Evaluation of student's reaction: As shown in figure 1 Student feedback regarding faculty development tools revealed that 50% of the student agreed that feedback should be help teachers to improve their teaching skill and 42% feel that it enhances the overall performance of the teachers and 84% Students strongly agreed (43%) to agreed (41%) that feedback should be filled by every batches during their class. Half of the students agreed that teacher's performance has helped them in their learning in the class.

Majority of the students disagreed that they are not mature enough to judge the teachers. 32% of the students feel that designation of the teachers influences the student's response.

**Figure 1: Student feedback regarding feedback as a faculty development tools evaluation on 5 point likert scale (n=217)**

Comparison of student feedback on teaching skill before and after intervention in all four batch teacher's showed that there was a significant difference in after intervention. Result was compare by using student t test and p value < 0.05 was considered significant.

Faculty feedback: It was collected from four teachers. All teachers felt that feedback is an effective tool for overcome their weakness and three teachers (out of four) felt that Students feedback as a teacher evaluation system made them uncomfortable. All teachers are agreed that student didn't give feedback seriously. All are strongly agreed that feedback should be taken after every semester and in all the batches.

Evaluation of students' knowledge by MCQ test (score out of 10) (n= 207): Average score of A batch student before feedback was 6.13 out of 10 and it was 8.14 after feedback was given to teacher,

it was statistically significant before and after giving a feedback ($p= 4.8E-15$, t-test, two tailed, paired). Similarly there was a significant difference in score of B batch student before and after feedback ($p= 1.3E-8$, t-test, two tailed, paired).

As shown in batch A and B student there was significant difference in C and D batch students, average score before feedback was 6.15 & 6.95 and after feedback it was 10 & 9.33 respectively. ($p= 1.7E-16$ & $8.6E-6$ respectively for C and D batch, t-test, two tailed, paired).

Comparison of average score of A and B batch's students after giving a feedback and C & D batch without giving feedback was also statistically significant ($p= 3.4E-6$, two tailed, unpaired t-test) and C and D batch's student's score before and after feedback score was also statistically significant ($p= 6.8E-21$, two tailed, t-test, unpaired).

Table 2: Overall comparison of teacher's teaching skill evaluation Proforma before and after intervention.

Sr. No.	Parameters	A&B batch teacher before and after giving feedback (p value)	A&B with feedback& C&D without feedback (p value)	C&D batch teacher before and after giving feedback (p value)
1	Organized and prepare for the classes	0.64	0.13	0.97
2	Prompt in conducting classes	0.30	0.07	0.11
3	Appropriately use different teaching aids[chalk board]	0.15	0.08	0.62
4	Clear in presentation	0.01	0.06	0.13
5	Communicates effectively	0.15	0.06	0.09
6	Recommends additional learning Resources	0.003	0.001	0.09
7	Provides timely feedback on student's proformance	0.06	0.03	0.30
8	Creates comfortable learning environment for the students	0.04	0.47	0.63
9	Provide assistance & counseling and available after classes	0.01	0.12	0.15
10	Interact and encourages to students	0.84	0.04	0.22
11	Maintain discipline in the class	0.16	0.17	0.03
12	Understanding regarding the practical	0.02	0.19	0.01

Discussion

Teachers evaluation process is an important in many area of teaching like preparation regarding class, presentation skills, comfortable environment in classroom, encourage students and provide additional learning resources. The main purpose of student feedback is helping the teachers to identify the strengths and weaknesses.

Student's evaluation of teaching has been found to be reliable. Many research study shown that teacher variables (Age, gender, designation, personality) and class variables like timing of class, class size

impact on evaluation of teachers. In our study most of the teachers mentioned that gender and designation was not important variables that affect the student's response. (cashin William et al., 1998) In present study we found that all teachers are agreed that students don't fill feedback form seriously and majority of the students are strongly disagreed that they aren't mature enough to judge a teachers performance, similarly research study shown that only students are in a position to provide a good feedback to teachers regarding their teaching skill. (Cohen P, McKeachie W.,1980). As we conduct a study in a way that we compare a

feedback of teachers before and after knowing the strength and weakness from the students regarding their teaching skill and we found a significant change in a teaching skill after knowing the strength and weakness from the students.

Although all the teachers agreed that students feedback made them more aware of the students need and helped them to improve their weakness and teaching skill but still feedback of students make them uncomfortable.

The limitation of this study is that it was done in practical class and in a single batch second year students of medical college to know the effectiveness of student feedback as an evaluation system.

This can be implemented in all incoming batches of every semester and in every teaching class including lectures and tutorial classes as it will help the teachers to further improve their skills and academic performance ultimately leading to overall teaching skill development and faculty development.

Conclusion

Student feedback is an important and effective tool for teacher's evaluation but other sources of feedback may also useful for overall teacher's assessment of teaching skill.

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